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The listing of claims will replace all prior versions, and listings, of claims in the application.

### **LISTING OF CLAIMS**

**Claim 1** (previously presented): A coated ferromagnetic particle comprising a ferromagnetic core and a coating, said coating consisting essentially of a residue resulting from a thermal treatment of a coating material ~~comprising~~ consisting essentially of a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof.

**Claim 2** (original): The coated ferromagnetic particle of claim 1, wherein said ferromagnetic core comprises a material selected from the group consisting of Fe and Fe alloys.

**Claim 3** (original): The coated ferromagnetic particle of claim 2, wherein said ferromagnetic core has an average diameter in a range from about 10 micrometers to about 1 millimeter.

**Claim 4** (original): The coated ferromagnetic particle of claim 1, wherein said polymer comprises a silicone polymer.

**Claim 5** (original): The coated ferromagnetic particle of claim 1, wherein said coating material has a weight in a range from about 0.05 weight percent to about 1 weight percent of a total weight of said ferromagnetic core and said coating material.

**Claim 6** (previously presented): A composite magnetic article comprising a compacted and annealed article of a desired shape comprising a plurality of coated ferromagnetic particles each comprising a ferromagnetic core and a coating, said coating consisting essentially of a residue resulting from a thermal treatment of a coating material ~~comprising~~ consisting essentially of a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof.

**Claim 7** (original): The composite magnetic article of claim 6, wherein said ferromagnetic core comprises a material selected from the group consisting of Fe and Fe alloys.

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**Claim 8** (original): The composite magnetic article of claim 7, wherein said ferromagnetic core has an average diameter in a range from about 10 micrometers to about 1 millimeter.

**Claim 9** (original): The composite magnetic article of claim 6, wherein said polymer comprises a silicone polymer.

**Claim 10** (original): The composite magnetic article of claim 6, wherein said coating material has a weight in a range from about 0.05 weight percent to about 1 weight percent of a total weight of said ferromagnetic core and said coating material.

**Claim 11** (previously presented): A composite magnetic article comprising a compacted and annealed article of a desired shape comprising a plurality of coated ferromagnetic particles each comprising a ferromagnetic core and a coating, said coating comprising a residue resulting from a thermal treatment of a coating material comprising a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof, wherein said composite article has a transverse rupture strength greater than about 100 MPa.

**Claim 12** (previously presented): The composite magnetic article of claim 11, wherein said composite magnetic article has a magnetic permeability greater than about 250 at a magnetic flux density of about 1 Tesla and a frequency of about 60 Hz.

**Claim 13** (previously presented): The composite magnetic article of claim 11, wherein said composite magnetic article has a core loss of less than about 35 W/kg at a magnetic flux density of about 1 Tesla and a frequency of about 60 Hz.

**Claim 14** (previously presented): A method for making a coated ferromagnetic particle, said method comprising the steps of:

- a. providing an uncoated ferromagnetic core;
- b. providing a coating material consisting essentially of a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof;

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- c. encapsulating said uncoated ferromagnetic core with said coating material comprising said polymer; and
- d. thermally treating said coating material so as to convert said coating material into a residue;

to produce said coated ferromagnetic particle.

**Claim 15 (original).** The method of claim 14, wherein said ferromagnetic core comprises a material selected from the group consisting of Fe and Fe alloys.

**Claim 16 (original):** The method of claim 15, wherein said ferromagnetic core has an average diameter in a range from about 10 micrometers to about 1 millimeter.

**Claim 17 (original):** The method of claim 14, wherein said polymer comprises a silicone polymer.

**Claim 18 (previously presented):** A method for making a coated ferromagnetic particle, said method comprising the steps of:

- a. providing an uncoated ferromagnetic core;
- b. providing a coating material comprising a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof;
- c. encapsulating said uncoated ferromagnetic core with said coating material comprising said polymer; and
- d. thermally treating said coating material so as to convert said coating material into a residue;

to produce said coated ferromagnetic particle, wherein said coating material has a weight in a range from about 0.05 weight percent to about 1 weight percent of a total weight of said ferromagnetic core and said coating material.

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**Claim 19** (original): The method of claim 14, wherein the step of thermally treating said coating material is performed at a temperature greater than about 250 °C.

**Claim 20** (previously presented): A method for producing a composite magnetic article, said method comprising the steps of:

- a. providing uncoated ferromagnetic particles;
- b. providing a coating material consisting essentially of a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof;
- c. encapsulating each of said uncoated ferromagnetic particles with said coating material to produce encapsulated ferromagnetic particles;
- d. subjecting said encapsulated ferromagnetic particles to a compaction to form a compact of a desired shape; and
- e. subjecting said compact to an annealing treatment;

to produce said composite magnetic article, wherein said composite magnetic article comprises a plurality of coated ferromagnetic particles wherein each particle comprises a ferromagnetic core and a coating, said coating consisting essentially of a residue resulting from a thermal treatment of said coating material.

**Claim 21** (original): The method of claim 20, wherein said ferromagnetic core comprises a material selected from the group consisting of Fe and Fe alloys.

**Claim 22** (original): The method of claim 21, wherein said ferromagnetic core has an average diameter in a range from about 10 micrometers to about 1 millimeter.

**Claim 23** (original): The method of claim 20, wherein said polymer comprises a silicone polymer.

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**Claim 24** (previously presented): A method for producing a composite magnetic article, said method comprising the steps of:

- a. providing uncoated ferromagnetic particles;
- b. providing a coating material comprising a polymer selected from the group consisting of polyorganosiloxanes, polyorganosilanes, and mixtures thereof;
- c. encapsulating each of said uncoated ferromagnetic particles with said coating material comprising said polymer to produce encapsulated ferromagnetic particles;
- d. subjecting said encapsulated ferromagnetic particles to a compaction to form a compact of a desired shape; and
- e. subjecting said compact to an annealing treatment;

to produce said composite magnetic article, wherein said composite magnetic article comprises a plurality of coated ferromagnetic particles wherein each particle comprises a ferromagnetic core and a coating, said coating comprising a residue resulting from a thermal treatment of said coating material comprising said polymer, wherein said coating material has a weight in a range from about 0.05 weight percent to about 1 weight percent of a total weight of said ferromagnetic core and said coating material.

**Claim 25** (original): The method of claim 20, wherein said annealing treatment is performed at an annealing temperature greater than about 400 °C.

**Claim 26** (original): The method of claim 25, wherein said annealing treatment is performed at said annealing temperature in a range from about 450 °C to about 950 °C.

**Claim 27** (original): The method of claim 26, wherein said annealing treatment is performed for an annealing time in a range from about one minute to about ten hours.

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**Claim 28** (previously presented): The method of claim 24, wherein said annealing treatment comprises a first annealing treatment and a second annealing treatment wherein said first annealing treatment is performed at at least a first annealing temperature for a first annealing time followed by said second annealing treatment performed at at least a second annealing temperature for a second annealing time.

**Claim 29** (original): The method of claim 28, wherein said first annealing temperature is in a range from about 450 °C to about 950 °C; said first annealing time is in a range from about one minute to about ten hours; said second annealing temperature is in a range from about 300 °C to about 600 °C; and said second annealing time is in a range from about one minute to about fifty hours.

**Claim 30** (original): The method of claim 20, wherein said compaction is performed using a compaction pressure in a range from about 250 MPa to about 1300 MPa.

**Claim 31** (original): The method of claim 20, wherein said compact is subjected to a decomposition treatment prior to said annealing treatment.

**Claim 32** (original): The method of claim 31, wherein said compact is subjected to said decomposition treatment at a temperature of greater than about 250 °C for between about one minute and ten hours.

**Claim 33** (previously presented): The method of claim 24, wherein said composite magnetic article has a transverse rupture strength greater than about 100 MPa.

**Claim 34** (previously presented): The method of claim 24, wherein said composite magnetic article has a magnetic permeability greater than about 250 at a magnetic flux density of about 1 Tesla and a frequency of about 60 Hz.

**Claim 35** (previously presented): The method of claim 24, wherein said composite magnetic article has a core loss of less than about 35 W/kg at a magnetic flux density of about 1 Tesla and a frequency of about 60 Hz.

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**Claim 36 (original):** The method of claim 20, wherein the step of encapsulating each of said uncoated ferromagnetic particles is done by a process selected from the group consisting of a dip coating process, a spray coating process, a fluidized bed coating process, and a precipitation coating process.

**Claim 37 (original):** A device using electromagnetic materials comprising the composite magnetic article of claim 6.

**Claim 38 (original):** The device of claim 37, selected from a group consisting of stators, rotors, solenoids, cores for transformers, inductors, actuators, MRI pole faces, and MRI shims.

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Respectfully submitted,

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